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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,710	10/17/2003	Satoshi Miyaji	032024	8795

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EXAMINER	
THOMAS, JASON M	

ART UNIT	PAPER NUMBER
2423	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentmail@whda.com

Office Action Summary	Application No.	Applicant(s)	
	10/686,710	MIYAJI ET AL.	
	Examiner	Art Unit	
	Jason Thomas	2423	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 April 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 10/686,710.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed April 16, 2010 have been fully considered but they are not persuasive.

Applicants argue that, “in Son (cols. 5-6, lines 57-4), there is no description showing some temporary holding device [where] ‘the caching server first [receives], inherently by some temporary holding device, the [uploaded preprocessed] content […]’.” (see pg. 8). Applicant goes further to state that, “Son does not disclose a buffer memory at all, as recited in claim 1. Also, Son does not teach a concept of dynamically buffer generating as recited in claim.” (see pg. 9). The examiner disagrees with this argument.

As recognized by the applicants in the arguments, "the examiner largely relies on Son and Binder in attempting to disclose the claimed features discussed." (see pg. 8). In response to applicant's arguments which singly address the Son reference, applicants fail to address the teachings provided by Binder as combined with Son.

Son provides a high level teaching of a content distribution system which uses a caching server to receive uploaded content which is then streamed to receiving devices. More specifically Son states that, "Once the preprocessed content is uploaded, the stream caching server 102 may store and stream the preprocessed content, or alternatively stream the content in real time..." (see [col. 5, ll. 57-4]). It is well known in the art for some form of buffer to be used at some point in such a

process, more specifically when data is streamed in real time upon as the data is being uploaded to allow for an adequate sustained transfer rate. While Son does not detail the specifics of how the caching server receives and streams the uploaded content in real time, Binder, an analogous reference, provides a more detailed, low level approach for the act of receiving and streaming media content to receiving devices.

Binder teaches a server system which is built using a memory array, which reads on a buffer, which similarly to Son, can receive uploaded content for streaming. This memory array is dynamic, as it is a buffer which uses random access techniques to allocates space for large files which can be streamed in real time when the first block of program material has been loaded into the memory array, or after the entire program has been loaded (see [0027], [0029-0033]). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the caching server of Son which receives uploaded content for streaming to receiving devices, by enabling it to use the benefits of a more efficient large scale memory array which can efficiently buffer entire programs through memory allocation for streaming to multiple receiving devices, as taught by Binder, in order to provide an adequate sustained transfer rate and greatly reduce the seek time, common to hard disk drive arrays (see [0008], [0009]).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Son et al., U.S. Pat. No. 7,159,233 B2 (hereinafter Son) in view of Binder et al., U.S. Pub. No. 2003/0095783 A1 (hereinafter Binder) and Honary et al., U.S. Pub. No. 2003/0219020 A1 (hereinafter Honary).

Regarding claim 1: Son discloses a moving picture file distributing device which receives a moving picture file by uploading and stores it in storage device, and distributes the moving picture file stored in the storage device to a client by downloading (see [fig. 1], [col. 3, ll. 5-20], [col. 4, ll. 28-38], [cols. 5-6, ll. 57-4], [col. 8, ll. 44-59], [col. 10, ll. 25-31], [col. 11, ll. 17-21] comprising: an upload buffer for temporarily holding a moving picture file at the time of reception (see [cols. 5-6, ll. 57-4] where the caching server first receives, inherently by some temporary holding device, the uploaded preprocessed content then subsequently determines whether to store the content in storage medium, such as a disk array, for later streaming or stream the uploaded content in real-time (RTP), the uploaded content being temporarily held in the caching server prior to being streamed to an end user; see also [col. 3, ll. 43-50], [col. 7, ll. 11-21] for the use of RTP, which inherently establishes sessions and general user sessions); and a download buffer for

temporarily holding a moving picture file at the time of distribution (see [abstract], [cols. 5-6, ll. 57-4], [col. 7, ll. 3-10], [col. 8, ll. 44-49], [claim 24] where the cache server also acts as a download buffer in that as an alternative to streaming content, from the sending device to the receiving device, the cache server can hold the content by some temporary device, acting as a buffer, and allow users to download receive the content in real-time directly from the caching server) but Son does not explicitly teach a dynamic generation of a buffer correspondent to a session, after that session number is received; or the separate step of buffering content for download as a separate session.

Binder teaches a device which dynamically generates a buffer, which reads on allocating memory, and transferring content between a source storage location and a solid state memory array to overcome the limiting factors associated with hard disk drives and the use of this feature for buffering content for downloads for user session (see [8], [9], [11], [31], [33]; see also [30], [42], [49] where customer sessions are established for this process to provide unique asynchronous streams between customers and the buffering device). Binder also teaches a server section directly connected to a buffer memory (see [figs. 1, 2] where the stream server module is directly connected to the buffer memory); wherein the buffer generating device is connected to said buffer memory (see [fig. 1], [31] for a backpane interface which is connected to the memory array); and a file input/output section directly connected to the buffer generating device and the buffer memory (see [29], [33] for stream server modules which read on I/O sections by acting as the gateway for all

incoming and outgoing data). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the cache server by enabling it to generate buffer space through the allocation of space in a solid state memory array, using the configuration, as taught by Binder, in order to greatly reduce limiting factors such as the sustained transfer rate and the seek time common to hard disk drive arrays (see [8], [9]).

While Binder mentions the use of sessions to interact with customer terminals, associating an identification number with a transmission session and initiating a transmission process after a session identification number is not disclosed.

Honary teaches that it is well known in the art that upon the establishment of a communication session, which is identified by a session ID, file transfer, which includes the use of buffering the transmitted content, can begin after the session, based on the session ID has begun (see [14], [23], [35]). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device by which a communication session is used for uploading or downloading content data, by providing session ID prior to engaging in the communication session, as taught by Honary, in order to associate all of the data related to a particular data exchange with a specific session ID thus providing more efficient and better controlled data distribution process.

Regarding claim 6: Son discloses a moving picture file distributing device comprising: an upload buffer for temporarily holding a moving picture file at the time

of reception (see [cols. 5-6, ll. 57-4] where the caching server first receives, inherently by some temporary holding device, the uploaded preprocessed content then subsequently determines whether to store the content in storage medium, such as a disk array, for later streaming or stream the uploaded content in real-time (RTP), the uploaded content being temporarily held in the caching server prior to being streamed to an end user; see also [col. 3, ll. 43-50], [col. 7, ll. 11-21] for the use of RTP, which inherently establishes sessions and general user sessions); and a download buffer for temporarily holding a moving picture file at the time of distribution (see [abstract], [cols. 5-6, ll. 57-4], [col. 7, ll. 3-10], [col. 8, ll. 44-49], [claim 24] where the cache server also acts as a download buffer in that as an alternative to streaming content, from the sending device to the receiving device, the cache server can hold the content by some temporary device, acting as a buffer, and allow users to download receive the content in real-time directly from the caching server) but Son does not explicitly teach a dynamic generation of a buffer correspondent to a session, after that session number is received; or the separate step of buffering content for download as a separate session.

Binder teaches a device which dynamically generates a buffer, which reads on allocating memory, and transferring content between a source storage location and a solid state memory array to overcome the limiting factors associated with hard disk drives and the use of this feature for buffering content for downloads for user session (see [8], [9], [11], [31], [33]; see also [30], [42], [49] where customer sessions are established for this process to provide unique asynchronous streams

between customers and the buffering device). Binder also teaches a network interface (see [fig. 4] for a module which interfaces with the network); see [fig. 4, 407] for a storage unit which is connected to a I/O unit); a server section directly connected to a buffer memory (see [figs. 1, 2] where the stream server module is directly connected to the buffer memory); wherein a buffer generating device is connected to said buffer memory (see [fig. 1, 103, 104, 107], [31] for a backpane interface and a stream server module which are connected to the memory array both of which manage buffer access and usage and controlled by the master cpu); and a file input/output unit directly connected to the buffer generating device and the buffer memory (see [29], [33] for stream server modules which read on I/O sections by acting as the gateway for all incoming and outgoing data). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the cache server by enabling it to generate buffer space through the allocation of space in a solid state memory array, using the configuration, as taught by Binder, in order to greatly reduce limiting factors such as the sustained transfer rate and the seek time common to hard disk drive arrays (see [8], [9]).

While Binder mentions the use of sessions to interact with customer terminals, associating an identification number with a transmission session and initiating a transmission process after a session identification number is not disclosed.

Honary teaches that it is well known in the art that upon the establishment of a communication session, which is identified by a session ID, file transfer, which

includes the use of buffering the transmitted content, can begin after the session, based on the session ID has begun (see [14], [23], [35]). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device by which a communication session is used for uploading or downloading content data, by providing session ID prior to engaging in the communication session, as taught by Honary, in order to associate all of the data related to a particular data exchange with a specific session ID thus providing more efficient and better controlled data distribution process.

3. Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Son in view of Binder, Honary and Kenner et al., U.S. Pat. No. 5,956,716 (hereinafter Kenner).

Regarding claims 2: The combined teachings of the aforementioned art teach device for, after holding an entire moving picture file in the upload buffer is completed, transferring the moving picture file to the storage device, wherein the upload buffer generating device generates an upload buffer when uploading is started (see Son [cols. 5-6, ll. 57-4], [col. 7, ll. 3-10] for, after holding the entire uploaded content, transferring to a hard disk array storage; see also Binder [33], [36] for allocating memory to hold entire content to increase transfer efficiency); but does not explicitly teach the device for, after an entire moving picture file is transferred to the storage device, eliminating the upload buffer.

Kenner teaches a session management system which creates a DSI (Data Sequencing Interface) as a part of a session management to manage each

individual user session acting as a link between session request and memory allocation, whereby upon the start of a video transfer the DSI is created and upon the completion of a video transfer the DSI is destroyed, eliminating all associations between the user session and memory allocated for said session (see [col. 5, ll. 8-16], [col. 12, ll. 5-32] where by removing the association the buffer for that session is eliminated). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify session management and control of the server module by providing a device of managing the associations between the user sessions and memory allocations for said sessions as taught by Kenner in order to optimize access to the most requested information and efficient storage with a maximum of useful redundancy without waste or loss of performance (see [col. 17, ll. 22-35]).

Regarding claims 3: The combined teachings of the aforementioned art teach device for, a fragment, which is a small part broken off from a moving picture, in the upload buffer where one fragment is completed before transferring the moving picture file to the storage device, wherein the upload buffer generating device generates an upload buffer when uploading is started; and device for, upon completing the content transfer, eliminating the upload buffer (see Son [cols. 5-6, ll. 57-4], [col. 7, ll. 3-10] for uploading content and transferring to a hard disk array storage; see also Binder [33] for transferring to a end user storage in segments as it is received; see also Kenner [col. 15, lines 14-23] where video can be stored in storage blocks which are stored separately; see also Kenner [col. 5, ll. 8-16], [col.

12, ll. 5-32] for a session management system which creates a DSI (Data Sequencing Interface) as a part of a session management to manage each individual user session acting as a link between session request and memory allocation, whereby upon the start of a video transfer the DSI is created and upon the completion of a video transfer the DSI is destroyed, eliminating all associations between the user session and memory allocated for said session, where by removing the association the buffer for that session is eliminated).

Regarding claims 4: The combined teachings of the aforementioned art teach device for, at the same time with the generation of the download buffer, transferring the moving picture file to be downloaded from the storage device to the download buffer, wherein the download buffer generating device generates an download buffer when downloading is started; and device for, after an entire moving picture file is downloaded, eliminating the download buffer (see Binder [33], [36] for allocating memory to hold entire content to increase transfer efficiency; see also where [31], [33] where at the same time the memory array allocates space for requested content, content can be placed in the memory array and ready to begin streaming piece by piece or delayed until transferred in whole; see also Kenner [col. 5, ll. 8-16], [col. 12, ll. 5-32] for a session management system which creates a DSI (Data Sequencing Interface) as a part of a session management to manage each individual user session acting as a link between session request and memory allocation, whereby upon the start of a video transfer the DSI is created and upon the completion of a video transfer the DSI is destroyed, eliminating all associations

between the user session and memory allocated for said session, where by removing the association the buffer for that session is eliminated).

Regarding claims 5: The combined teachings of the aforementioned art teach device for, at the same time with the generation of a download buffer, transferring a moving picture file to be downloaded from the storage device to the download buffer by one fragment at a time, wherein the download buffer generating device generates an download buffer when downloading is started; and device for, upon completing the content download, eliminating the download buffer (see Binder [33] for transferring to a end user storage in segments as it is received; see also where [31], [33] where at the same time the memory array allocates space for requested content, content can be placed in the memory array and ready to begin streaming piece by piece or delayed until transferred in whole; see also Kenner [col. 15, lines 14-23] where video can be stored in storage blocks which are stored separately; see also Kenner [col. 5, ll. 8-16], [col. 12, ll. 5-32] for a session management system which creates a DSI (Data Sequencing Interface) as a part of a session management to manage each individual user session acting as a link between session request and memory allocation, whereby upon the start of a video transfer the DSI is created and upon the completion of a video transfer the DSI is destroyed, eliminating all associations between the user session and memory allocated for said session, where by removing the association the buffer for that session is eliminated).

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Son in view of Binder, Honary and Morag et al., U.S. Pat. No. 6,058,399 (hereinafter Morag).

Regarding claim 7: The combined teachings of the aforementioned art do not teach wherein a unique upload or download session identification number is created during each occurrence of a new file to be uploaded or downloaded as requested by a user.

Morag teaches providing unique identifications for data transmission sessions (see [cols. 2-3, ll. 64-25]). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the way in which sessions are associated with the content being transferred by providing a unique session ID for each data transmission sessions, as taught by Morag, in order to provide a device of determining which files have been transferred and which files have been cancelled and were not completely transmitted.

5. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Son in view of Binder, Honary and Wakimoto et al., U.S. Pub. No. 2002/0162110 A1 (hereinafter Wakimoto).

Regarding claims 8 and 9: The combined teachings of the aforementioned art do not teach wherein the upload/download buffer generator dynamically generates a plurality of dynamic upload/download buffers.

Wakimoto teaches a system which provides a plurality of buffers as a device to expand it's ability to service end users (see [145]). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to

modify the number of buffers which are available for servicing the end users by providing a plurality of buffer devices capable of buffering content, as taught by Wakimoto, in order to expand upon the volume of data which can be processed by the system.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Thomas whose telephone number is (571) 270-5080. The examiner can normally be reached on Mon. - Thurs., 8:00 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Koenig can be reached on (571) 272-7296. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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